LEADGENE
LEADGENE BIOMEDICAL, INC.

Datasheet

Cholesterol Oxidase (CO)

Catalog Number	LDG0025RG
Package	Customized package

For full product information, images and publications, please visit our website.

Overview

Description

Cholesterol oxidase (CO) is a bacterial enzyme that catalyzes the oxidation of cholesterol to cholest-4-en-3-one, producing hydrogen peroxide as a byproduct. This enzyme is widely used in clinical diagnostics for measuring cholesterol levels in blood samples, as it plays a crucial role in cholesterol metabolism. Additionally, cholesterol oxidase is used in research to study cholesterol biosynthesis, and in the biotechnology industry for the production of steroids and as a biocatalyst in biosensors. It is primarily sourced from species such as Streptomyces and Brevibacterium.

Specifications

Expression system

Escherichia coli

Activity

≥40 U/mg

Unit Definition

One unit causes the formation of one micromole of hydrogen peroxide (half a micromole of quinoneimine dye) per minute under the conditions detailed below. (87 mM Potassim phosphate buffer, 0.89 mM Cholesterol, 1.4 mM 4-Aminoantipyrine, 21 mM Phenol, 0.34 % Triton X-100, 64 mM Sodium cholate, 33 μg/ mL BSA, 5 U/ mL Peroxidase)

Form

Lyophilized (Yellow amorphous powder)

Instruction

Reconstitution

It is recommended to weight 10 mg of lyophilized powder, reconstitute in 1 mL double-distilled water directly, and incubate the solution for at least 10 mins to ensure sufficient re-dissolved.

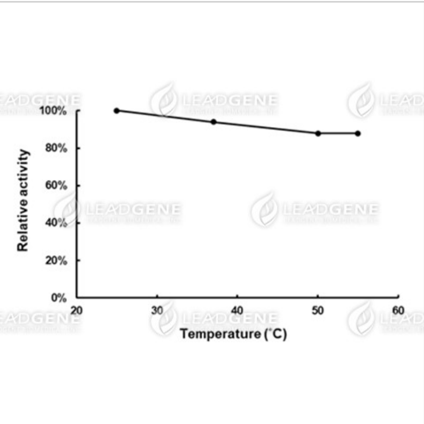
Stability & Storage

This product is stable at -20°C for long-term storage under sterile conditions.
Avoid repeated free-thaw cycles.

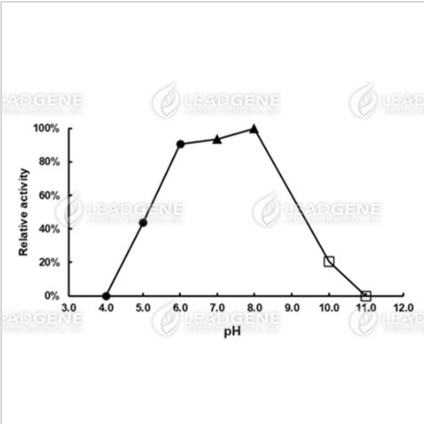
Shipping

The product is shipped with polar packs. Upon receipt, store it immediately at -20°C or lower for long term storage.

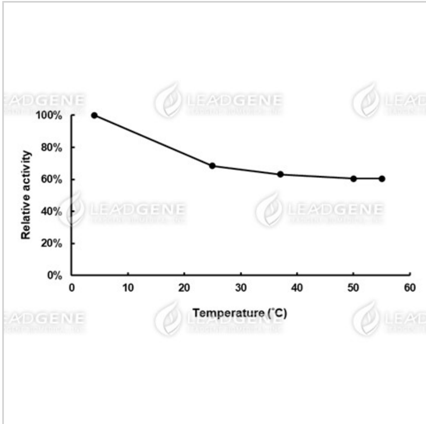
Image



Temperature activity of Cholesterol oxidase.
The enzyme reactions in 0.1 M Potassium phosphate buffer, pH 7.0, were carried out under different temperature



pH activity of Cholesterol oxidase.
The buffer conditions with various pH values were used in the reaction at 37°C. pH 4.0-6.0, 0.1 M Sodium citrate buffer; pH 7.0-8.0, 0.1 M Potassium phosphate buffer; pH 10.0-11.0, 0.1 M Carbonate-bicarbonate buffer.



Thermal stability of Cholesterol oxidase.
The enzyme powder was reconstituted by double-distilled water and treated with different temperature for 15 minutes. Final concentration: 4.3 U/mL.

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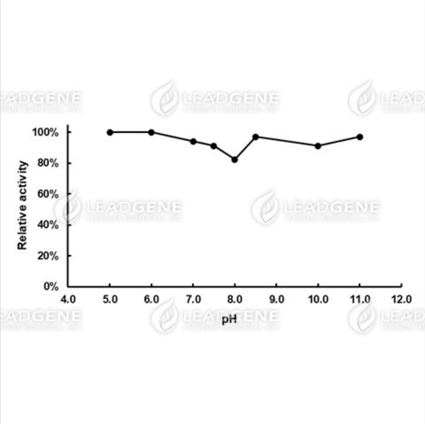

pH stability of Cholesterol oxidase. The enzyme powder was reconstituted by double-distilled water and treated with different pH buffer condition for 20 hours. pH 4.0-6.0, 0.1 M Sodium citrate buffer; pH 7.0-8.0, 0.1 M Potassium phosphate buffer; pH 8.5, 0.1 M Tris-HCl buffer; pH 10.0-11.0, 0.1 M Carbonate-bicarbonate buffer.

Disclaimer : For Research Use or Further Manufacturing Only.

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